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Protein

Genome

Structure

PopSet

Taxonomy

OMIM

Boo

Nucleotide

Search for

Go

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Preview/Index

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Details

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Text

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1: NM_000163. Homo sapiens grow...[gi:4503992]

Links

LOCUS GHR 4414 bp mRNA linear PRI 05-NOV-2002
DEFINITION Homo sapiens growth hormone receptor (GHR), mRNA.
ACCESSION NM_000163
VERSION NM_000163.1 GI:4503992
KEYWORDS
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE 1 (bases 1 to 4414)
AUTHORS Leung,D.W., Spencer,S.A., Cachianes,G., Hammonds,R.G., Collins,C.,
Henzel,W.J., Barnard,R., Waters,M.J. and Wood,W.I.
TITLE Growth hormone receptor and serum binding protein: purification,
cloning and expression
JOURNAL Nature 330 (6148), 537-543 (1987)
MEDLINE 88065896
PUBMED 2825030
REFERENCE 2 (bases 1 to 4414)
AUTHORS Godowski,P.J., Leung,D.W., Meacham,L.R., Galgani,J.P., Hellmiss,R.,
Keret,R., Rotwein,P.S., Parks,J.S., Laron,Z. and Wood,W.I.
TITLE Characterization of the human growth hormone receptor gene and
demonstration of a partial gene deletion in two patients with
Laron-type dwarfism
JOURNAL Proc. Natl. Acad. Sci. U.S.A. 86 (20), 8083-8087 (1989)
MEDLINE 90046742
PUBMED 2813379
REFERENCE 3 (bases 1 to 4414)
AUTHORS Ayling,R.M., Ross,R., Towner,P., Von Laue,S., Finidori,J.,
Moutoussamy,S., Buchanan,C.R., Clayton,P.E. and Norman,M.R.
TITLE A dominant-negative mutation of the growth hormone receptor causes
familial short stature
JOURNAL Nat. Genet. 16 (1), 13-14 (1997)
MEDLINE 97285114
PUBMED 9140387
REFERENCE 4 (bases 1 to 4414)
AUTHORS Behncken,S.N., Rowlinson,S.W., Rowland,J.E., Conway-Campbell,B.L.,
Monks,T.A. and Waters,M.J.
TITLE Aspartate 171 is the major primate-specific determinant of human
growth hormone. Engineering porcine growth hormone to activate the
human receptor
JOURNAL J. Biol. Chem. 272 (43), 27077-27083 (1997)
MEDLINE 98001682
PUBMED 9341147
REFERENCE 5 (bases 1 to 4414)
AUTHORS Pantel,J., Machinis,K., Sobrier,M.L., Duquesnoy,P., Goossens,M. and
Amselem,S.
TITLE Species-specific alternative splice mimicry at the growth hormone

receptor locus revealed by the lineage of retroelements during primate evolution

J. Biol. Chem. 275 (25), 18664-18669 (2000)

MEDLINE 20317053

PUBMED 10764769

COMMENT PROVISIONAL REFSEQ: This record has not yet been subject to final NCBI review. The reference sequence was derived from X06562.1.
Summary: Biologically active growth hormone (MIM 139250) binds its transmembrane receptor (GHR), which dimerizes to activate an intracellular signal transduction pathway leading to synthesis and secretion of insulin-like growth factor I (IGF1; MIM 147440). In plasma, IGF1 binds to the soluble IGF1 receptor (IGF1R; MIM 147370). At target cells, this complex activates signal-transduction pathways that result in the mitogenic and anabolic responses that lead to growth.[supplied by OMIM].

FEATURES

	Location/Qualifiers
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ORIGIN

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Revised: July 5, 2002.

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Dec 13 2002 14:41:17



HyPhy Documentation: Amino Acid Translation Table: Rate distributions

Note: This table is identical to PHYLIP's translation table.

Character	Translation
A	Alanine (Ala)
C	Cysteine (Cys)
D	Aspartic Acid (Asp)
E	Glutamin Acid (Glu)
F	Phenylalanine (Phe)
G	Glycine (Gly)
H	Histidine (His)
I	Isoleucine (Ile)
K	Lysine (Lys)
L	Leucine (Leu)
M	Methionine (Met)
N	Asparagine (Asn)
P	Proline (Pro)
Q	Glutamine (Gln)
R	Arginine (Arg)
S	Serine (Ser)
T	Threonine (Thr)
V	Valine (Val)
W	Tryptophan (Trp)
Y	Tyrosine (Tyr)
B	D or N (Asn or Asp)
Z	E or Q (Gln or Glu)
X,?	Unknown amino acid (any of the 20)
-	Skipped or unknown (see <u>Deletions and Ambiguities</u>)
.	For sequential file formats is interpreted as '?'. For interleaved formats signals that '.' should be replaced with the character at the same position in the first sequence.

HYPHY provides means for defining custom alphabets and translations. In particular, *HYPHY* recognizes relevant NEXUS blocks. However one must be careful with custom alphabets since they require model redefinitions.

Sergei L. Kosakovsky Pond and Spencer V. Muse.

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	UUC	Phe	UCC	Ser	UAC	Tyr	UGC	Cys
	UUA	Leu	UCA	Ser	UAA	End	UGA	End
	UUG	Leu	UCG	Ser	UAG	End	UGG	Trp
C	CUU	Leu	CCU	Pro	CAU	His	CGU	Arg
	CUC	Leu	CCC	Pro	CAC	His	CGC	Arg
	CUA	Leu	CCA	Pro	CAA	Gln	CGA	Arg
	CUG	Leu	CCG	Pro	CAG	Gln	CGG	Arg
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	GUG	Val	GCG	Ala	GAG	Glu	GGG	Gly

